

Glossary

ACID: A substance having a sour or sharp flavor. Foods generally referred to as acids include citrus juice, vinegar, and wine. A substance's degree of acidity is measured on the pH scale; acids have a pH of less than 7.

ACTIVE DRY YEAST: A dehydrated form of yeast that needs to be hydrated in warm water (105°F/41°C) before use. It contains about one-tenth the moisture of compressed yeast.

ADULTERATED FOOD: Food that has been contaminated to the point that it is considered unfit for human consumption.

AERATION: Incorporation of air by beating or whipping the ingredients together.

AEROBIC BACTERIA: Bacteria that require the presence of oxygen to function.

AGAR-AGAR: A gelling agent derived from certain sea vegetables. It is eight times stronger than gelatin.

AGITATE: To stir.

ALBUMIN: A water-soluble protein found in egg whites.

ALKALI: A substance that tests at higher than 7 on the pH scale. Baking soda is an example of an alkaline ingredient.

ALMOND PASTE: A mass of ground almonds and sugar.

ALPHA CRYSTALS: Large crystals in untempered chocolate. They are not uniform or stable, and must be melted at 83°F/28°C to properly temper chocolate.

AMYLOPECTIN: A component of starch composed of irregularly branched molecules. With a high presence of amylopectin, a starch will act to increase viscosity to a greater extent without causing a gel to form.

AMYLOSE: A component of starch composed of long, linear molecules. The higher the presence of amylose, the more the substance is prone to gel.

ANAEROBIC BACTERIA: Bacteria that do not require oxygen to function.

ASH CONTENT: The mineral content in flour.

AUTOLYSE: A resting period for dough after mixing the flour and water. This rest allows the dough to fully hydrate and to relax the gluten.

BACTERIA: Microscopic organisms. Some have beneficial properties; others can cause food-borne illnesses when foods they contaminate are ingested.

BAKING POWDER: A chemical leavening agent composed of sodium bicarbonate, an acid, and a moisture absorber such as cornstarch. When moistened and exposed to heat, it releases carbon dioxide to leaven a batter or dough.

BAKING SODA: A chemical leavening agent. Sodium bicarbonate is an alkali that when combined with an acid breaks down and releases carbon dioxide. This reaction causes the product to leaven as it is baked.

BATTER: A pourable mixture of combined ingredients, high in liquefiers.

BAUMÉ (BÉ): The scale for expressing the specific gravity of a liquid or the method for measuring the density of sugar syrups. It is expressed in degrees.

BENCH REST: In yeast dough production, the stage that allows the gluten in preshaped dough to relax before the final shaping. Also known as secondary fermentation.

BETA CRYSTALS: The small, stable fat crystals that give chocolate its shine and snap.

BIGA: Italian for an aged dough. A type of pre-ferment containing 50 to 60 percent water and ⅓ to ½ percent instant yeast.

BITTERSWEET CHOCOLATE: Chocolate containing a minimum of 35 percent chocolate liquor with varying amounts of sweeteners and cocoa butter.

BLANCH: To remove the skins from nuts by scalding.

BLEND: To fold or mix ingredients together.

BLIND BAKE: To partially or completely bake an unfilled pastry crust.

BLOCK METHOD: A method for tempering chocolate in which a block of tempered chocolate is added to melted chocolate and agitated until the proper temperature is reached, at which time the block is removed.

BLOOMING: (1) The process of allowing gelatin to soften in cold water (gelatin sheets) or soak up cold water (granulated gelatin). (2) For chocolate, see Fat Bloom and Sugar Bloom.

BOULANGER: French for “baker.”

BRAN: The tough outer layer of a grain kernel and the part highest in fiber.

BRIX SCALE: A scale of measurement (decimal system) used to determine the density and concentration of sugar in a solution. It is expressed in degrees.

CARAMELIZATION: The process of cooking sugar in the presence of heat. The temperature range in which sugar caramelizes is approximately 320° to 360°F/160° to 182°C. The browning of sugar enhances the flavor and appearance of food.

CHEMICAL LEAVENER: An ingredient such as baking soda or baking powder used in a chemical action to produce carbon dioxide gas to leaven baked goods.

CHOCOLATE LIQUOR: The product made by grinding cocoa beans without adding sugar or cocoa butter.

COATING CHOCOLATE: Chocolate made with fats other than cocoa butter, which does not require tempering to use.

COCOA BUTTER: The fat extracted from the cacao bean.

COMMON MERINGUE: A mixture of egg whites and sugar, beaten until it reaches soft, medium, or stiff peaks. Also called French meringue.

COMPOUND CHOCOLATE: See Coating Chocolate.

COMPRESSED FRESH YEAST: Moist yeast is that must be refrigerated because it is extremely perishable.

COUVERTURE: A type of chocolate specifically designed for coating or incorporation with other ingredients. Extra cocoa butter is added to increase its smoothness, flexibility, and gloss after tempering. The cocoa butter content of couverture should be at least 32 percent.

CREAMING: Blending fats and sugar together to incorporate air.

CROSS CONTAMINATION: The transference of disease-causing elements from one source to another through physical contact.

CRUMB: The interior texture of baked goods.

CRYSTALLIZATION: A process that occurs when sugar is deposited from a solution.

DENATURE: To alter the original form of a substance. In proteins, exposure to heat or acid will denature or “cook” the protein.

DEXTRROSE: A simple sugar made by the action of acids or enzymes on starch. Also known as corn sugar.

DISACCHARIDE: A double or complex sugar. When fructose and dextrose are bonded together, this is called sucrose, or table sugar. Maltose is another example of a disaccharide.

DISSOLVING: Heating bloomed gelatin until it is transparent and liquid.

DOCK: To pierce dough lightly with a fork or dough docker (resembles a spiked paint roller) to allow steam to escape during baking. This helps the dough to remain flat and even.

DOCTOR: A substance that is added to a sugar solution to help prevent crystallization. Common doctors are acids and glucose.

DOUGH: A mixture of ingredients high in stabilizers and often stiff enough to cut into shapes.

DUTCH-PROCESS COCOA: Cocoa made by adding alkali to nibs or to cocoa powder to develop certain flavors, reduce acidity, and make it more soluble.

EMULSION: The suspension of two ingredients that do not usually mix. Butter is an emulsion of water in fat.

ENDOSPERM: The inside portion of a grain, usually the largest portion, composed primarily of starch and protein.

ENRICHED DOUGH: Dough that is enriched includes ingredients that add fat or vitamins. Examples of these ingredients are sugar, eggs, milk, and fats.

FACULTATIVE BACTERIA: Bacteria that can survive both with and without oxygen.

FAT BLOOM: The white cast and soft texture of chocolate that is the result of poor tempering or exposure of the chocolate to high temperatures. Although fat bloom is visually and texturally unappealing, the chocolate is safe to eat.

FERMENTATION: A process that happens in any dough containing yeast. As the yeast eats the sugars present in the dough, carbon dioxide is released, which causes the dough to expand. It begins as soon as the ingredients are mixed together and continues until the dough reaches an internal temperature of 138°F/59°C during baking. Fermentation alters the flavor and appearance of the final product.

FOAMING: The process of beating eggs (whole eggs, yolks, or whites) to incorporate air until they form a light, fluffy substance with many small air bubbles.

FOLDING: (1) Incorporating a lighter mixture into a heavier one. (2) The process of bending a dough over itself during the bulk fermentation stage to redistribute the available food supply for the yeast, equalize the temperature of the dough, expel gases, and further develop the gluten in the dough.

FONDANT: Sugar, cooked with corn syrup, that is induced to crystallize by constant agitation, in order to produce the finest possible crystalline structure. Fondant is used as centers in chocolate production, and as a glaze in pastries.

FOOD-BORNE ILLNESS: An illness in humans caused by the consumption of an adulterated food product. In order for a food-borne illness to be considered official, it must involve two or more people who have eaten the same food, and it must be confirmed by health officials.

FORMULA: A recipe in which measurements for each ingredient are given as percentages of the weight for the main ingredient.

FRUCTOSE: A monosaccharide that occurs naturally in fruits and honey. Also known as fruit sugar or levulose.

GANACHE: An emulsion of chocolate and cream. Ganache may also be made with butter or other liquids in place of the cream.

GÂTEAU: French for “cake.”

GEL: (Noun) A colloidal dispersion of solids that trap water. (Verb) To set to a firm or semifirm state by a colloidal dispersion of solids that trap water.

GELATIN: A protein derived from the skins and tendons of animals. Gelatin is used as a binder and stabilizer. It is available in granulated and sheet forms.

GELATINIZATION: The process in which heated starch granules that are suspended in liquid begin to absorb liquid and swell in size.

GERM: The embryo of a cereal grain that is usually separated from the endosperm during milling because it contains oils that accelerate the spoilage of flours and meals.

GLIADIN: A protein found in wheat flour. The part of gluten that gives it extensibility and viscosity.

GLUCOSE: (1) A monosaccharide that occurs naturally in fruits, some vegetables, and honey. Also known as dextrose. (2) A food additive used in confections.

GLUTEN: The protein component in wheat flour that builds structure and strength in baked goods. It is developed when the proteins glutenin and gliadin are moistened and agitated (kneaded). It provides the characteristic elasticity and extensibility of dough.

GLUTENIN: A protein found in wheat flour. The part of gluten that gives it strength and elasticity.

GRAIN: (Verb) To crystallize. Fondant is agitated until it grains. (Noun) A seed or fruit of a cereal grass.

GUM ARABIC: A water-soluble vegetable substance obtained from the stems and branches of various species of acacia trees. It is used to thicken, emulsify, and stabilize foods such as candy and ice cream.

GUM PASTE: A white modeling substance made from gum tragacanth or gelatin, water, glucose, and sugar.

GUM TRAGACANTH: A substance obtained from the Asian shrub *Astragalus gummifier* that is used to thicken, emulsify, and stabilize foods.

HOMOGENIZE: To mix ingredients together so their particles are reduced to a uniform size and are distributed evenly throughout the mixture.

HUMECTANT: A type of food additive used to promote moisture retention.

HYDRATE: To combine ingredients with water.

HYDRATION PERCENTAGE: The amount of liquid absorbed in a formula.

HYDROGENATION: The process in which hydrogen atoms are added to an unsaturated fat molecule, making it partially or completely saturated at room temperature. Vegetable oils are hydrogenated to create shortening.

HYDROLYZE: To chemically split one compound into other compounds by taking up the elements of water. Cornstarch is hydrolyzed to produce corn syrup.

HYGROSCOPIC: Absorbing moisture from the air. Sugar and salt are both hygroscopic ingredients.

INFECTIION: Contamination by disease-causing agents, such as bacteria, consumed via foods.

INFUSE: To flavor by allowing an aromatic to steep in the substance to be flavored. Infusions may be made either hot or cold.

INTOXICATION: Poisoning. A state of being tainted with toxins, particularly those produced by microorganisms that have infected food.

INVERT SUGAR: Sucrose that has been broken down (inverted) into a mix of dextrose (glucose) and levulose (fructose). It is sweeter and more soluble than sucrose, and does not crystallize as easily.

ITALIAN MERINGUE: A mixture of whipped egg whites and hot sugar syrup (140°F/60°C), whipped further until shiny, fluffy, and cool.

KUCHEN: German for “cake” or “pastry.”

LACTIC ACID: An acid produced when lactose is fermented. It occurs naturally when milk is soured.

LACTOSE: The simple sugar found in milk.

LAMINATION: The technique of creating alternating layers of fat and dough through a process of repeated rolling and folding.

LEAN DOUGH: A yeast dough that does not contain fats or sugar.

LEAVENING: Raising or lightening by air, steam, or gas (carbon dioxide). In baking, leavening occurs with yeast

(organic), baking powder or baking soda (chemical), and steam (physical/mechanical).

LECITHIN: A naturally occurring emulsifier found in egg yolks and legumes.

LEVULOSE: A simple sugar found in honey and fruits. It is also known as fructose or fruit sugar.

LIQUEFIER: An ingredient that helps to loosen a dough or batter and make it more fluid. Sugar, fats, and water or milk are examples of liquefiers in baking.

MAILLARD REACTION: A complex browning reaction that results in the particular flavor and color of foods that do not contain much sugar, such as bread. The reaction, which involves carbohydrates and amino acids, is named after the French scientist who first discovered it.

MARZIPAN: A pliable dough of almonds and sugar. Marzipan may also be flavored by the addition of nuts other than almonds.

MASKING: Covering a cake with icing, frosting, or glaze.

MERINGUE: A white, frothy mass of beaten egg whites and sugar. Versions are common (or French) meringue, Italian meringue, and Swiss meringue.

MIGNARDISES: An assortment of small, two-bite-size pastries.

MILK CHOCOLATE: Sweet chocolate to which whole or skim milk powder has been added. It must contain at least 10 percent chocolate liquor by weight, although premium brands contain more.

MILLE-FEUILLE: French for “thousand leaves.” This pastry, made from puff pastry dough, is known in America as a napoleon.

MISE EN PLACE: French for “put in place.” The preparation and assembly of ingredients, pans, utensils, and plates or serving pieces needed for a particular dish or service period.

MIXING: The combination of ingredients.

MONOSACCHARIDE: A single or simple sugar and the basic building block of sugars and starches. Fructose, glucose, levulose, and dextrose are examples of monosaccharides.

NAPPÉ: The consistency of a liquid that will coat or cover the back of a spoon.

ORGANIC LEAVENER: Yeast. A living organism operates by fermenting sugar to produce carbon dioxide gas, causing the batter or dough to rise.

OVEN SPRING: The rapid initial rise of yeast doughs when placed in a hot oven. Heat accelerates the growth of the yeast, which produces more carbon dioxide gas, and also causes this gas to expand. This continues until the dough reaches a temperature of 140°F/60°C.

OVERRUN: The increase in volume of ice cream caused by the incorporation of air during the freezing process.

PAIN: French for “bread.”

PAR-BAKE: To start and then interrupt the baking process to finish it at a later time.

PASTILLAGE: See Gum Paste.

PÂTE À GLACIER, BLOND: Coating chocolate that is light in color.

PATHOGEN: A disease-causing microorganism.

PATISSIER: French for “pastry chef.”

PECTIN: A gelling agent or thickener found in fruits, particularly in apples, quince, and the skins of citrus fruits.

PETIT FOUR: A small bite-size cake, pastry, cookie, or confection. The term is French for “small oven.”

PH SCALE: A scale with values from 0 to 14 representing degrees of acidity. A measurement of 7 is neutral, 0 is most acidic, and 14 is most alkaline. Chemically, pH measures the concentration and activity of the element hydrogen.

PHYSICAL LEAVENING: A process that occurs when air and/or moisture that is trapped during the mixing process expands as it is heated. This can occur through foaming, creaming, or lamination. Also known as mechanical leavening.

POLYSACCHARIDE: A complex carbohydrate such as a starch that consists of long chains of saccharides, amylose, and amylopectin.

POOLISH: A semiliquid starter dough with equal parts (by weight) of flour and water blended with yeast and allowed to ferment for 3 to 15 hours.

PRE-FERMENT: A piece of dough saved from the previous day's production to be used in the following day's dough.

PRESHAPING: The gentle first shaping of dough. Also known as rounding.

PROOF: To allow yeast dough to rise.

PROTEASES: Enzymes that break down the collagen in gelatin and do not allow it to set or gel. This destructive enzyme is found in kiwi, pineapple, papaya, and other fruits.

RATIOS: A general formula of ingredients that can be varied.

RECIPE: A specific formula of ingredients and amounts.

RETROGRADATION: The process in which starches high in amylose revert back to their insoluble form after they are gelatinized and then undergo freezing, refrigeration, or aging. This reaction causes changes in texture and appearance.

SACCHARIDE: A sugar molecule.

SANITATION: The preparation and distribution of food in a clean environment by healthy food workers.

SANITIZE: To kill pathogenic organisms chemically or by moist heat.

SCALE: (1) To measure ingredients by weight. (2) To multiply or divide the quantities in a formula to change the yield. (3) To portion batter or dough according to weight or size.

SCORE: To make incisions into dough that allow steam to escape and the crust to expand. Also known as slashing or docking.

SECONDARY FERMENTATION: See Bench Rest.

SEED: (1) In chocolate tempering, a portion of tempered chocolate added to melted chocolate to begin the formation of beta crystals. (2) Anything that acts as a surface to which sugar will adhere and crystallize.

SEED METHOD: A method of tempering chocolate. Chopped tempered chocolate (seeds) are added to the melted chocolate and agitated until the desired temperature is reached.

SEMISWEET CHOCOLATE: Chocolate that contains between 15 and 35 percent chocolate liquor. In addition to chocolate liquor, it contains added cocoa butter, sugar, vanilla or vanillin, and often lecithin.

SHORTENING AGENTS: Fats and oils. This term is derived from fat's ability to split the long, elastic gluten strands that can toughen dough and batters. This tenderizing effect renders the strands more susceptible to breaking or "shortening," resulting in a more tender and less dense crumb.

STABILIZER: An ingredient that helps to develop the solid structure or "framework" of a finished product. Flour and eggs act as stabilizers in baking.

STARTER: A mixture of flour, liquid, and commercial or wild yeast that is allowed to ferment. The starter must be "fed" with flour and water to keep it alive and active.

STEEP: To allow to infuse.

SUCROSE: Table sugar. A disaccharide extracted from sugarcane or sugar beets; consists of glucose and fructose joined together in the molecule.

SUGAR BLOOM: The result of damp storage conditions for milk or dark chocolate. When the moisture evaporates, a white crust of sugar crystals is left behind. Like fat bloom, it is visually and texturally unappealing, but the chocolate is still safe to eat.

SWISS MERINGUE: A mixture of egg whites and sugar heated over simmering water until it reaches 140°F/60°C; it is then whipped until it reaches the desired peak and is cool.

TABLING METHOD: A method of tempering chocolate. A percentage of the chocolate is poured onto a marble slab and agitated until it begins to set. It is then added back to the remaining melted chocolate and stirred until it reaches the proper working temperature.

TART: A shallow, usually open-faced pastry shell with filling.

TARTLET: A small, single-serving tart.

TEMPER: (1) To melt, agitate, and cool chocolate to ensure that it retains its smooth gloss, crisp "snap" feel, and creamy texture. (2) To heat gently and gradually, as in the process of incorporating hot liquid into a liaison to gradually raise its temperature.

TEXTURE: The interior grain or structure of a baked product as shown by a cut surface; the feeling of a substance under the fingers.

TORTE: German for "cake." It can be multilayered or a single, dense layer.

TOXIN: A naturally occurring poison, particularly those produced by the metabolic activity of living organisms such as bacteria.

TRUFFLE: A ganache center that is usually coated with chocolate. Truffles are round and are named after the fungus that they resemble.

UNSWEETENED CHOCOLATE: Chocolate liquor without added sugar or flavorings.

VIRUS: A type of pathogenic microorganism that can be transmitted in food. Viruses cause such illnesses as measles, chicken pox, infectious hepatitis, and colds.

VISCOSITY: The quantity that describes a fluid's resistance to flow.

WHIP: To beat an item, such as cream or egg whites, to incorporate air.

WHITE CHOCOLATE: True white chocolate, such as that found in Europe, is made from cocoa butter, milk, sugar, and flavorings, and it contains no chocolate liquor. In the United States, white confectionery coating, made with vegetable fat instead of cocoa butter, is more readily available.